## (19) World Intellectual Property Organization International Bureau



## 

(43) International Publication Date 9 February 2006 (09.02.2006)

PCT

## (10) International Publication Number WO 2006/014138 A1

- (51) International Patent Classification<sup>7</sup>: 220/02, 220/10, A61F 9/00, G02C 7/04
- C08F 2/22,
- (21) International Application Number:

PCT/SG2004/000237

- (22) International Filing Date: 3 August 2004 (03.08.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 20 Biopolis Way, #07-01 Centros, Singapore 138668 (SG).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CHOW, Pei Yong, Edwin [SG/SG]; 462 Corporation Road, #07-02, Parc Vista Tower 7, Singapore 649816 (SG). YANG, Y1 Yan [CN/SG]; Block 5 Dover Crescent, #04-10, Singapore 130005 (SG).
- (74) Agent: YU SARN AUDREY & PARTNERS; 190 Middle Road, #12-04, Singapore 188979 (SG).

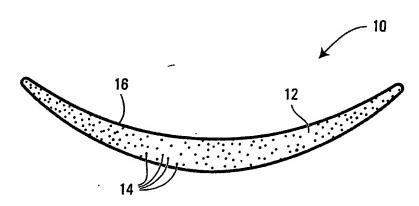
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, IP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POLYMER HAVING INTERCONNECTED PORES FOR DRUG DELIVERY AND METHOD



(57) Abstract: A bicontinuous microemulsion of water, a monomer, and a surfactant copolymerizable with the monomer is polymerized to form a transparent and porous polymer defining interconnected pores. The pores may have a pore diameter in the range of 10 to 100 mm. The microemulsion may further include a drug such that, when the polymer is formed, the drug is dispersed in one or both of the polymer and the pores and is releasable therefrom when the polymer is in contact with a liquid. The drug may be an ophthalmic drug and the polymer can be used to form drug delivery devices, such as contact lenses and artificial corneas.

WO 2006/014138 A